

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

**PPG INDUSTRIES, INC., a Pennsylvania  
corporation,**

**Plaintiff,**

**v.**

**JIANGSU TIE MAO GLASS CO., LTD., a  
Chinese company; BENHUA WU, an  
individual; and MEI ZHANG, an  
individual.**

**Defendants.**

**Case No.: 2:15-cv-00965-MRH**

**PLAINTIFF'S SUPPLEMENTAL MEMORANDUM IN SUPPORT OF ITS REQUEST  
FOR MONETARY DAMAGES**

Plaintiff PPG Industries, Inc. (“PPG”), by and through its undersigned counsel and pursuant to this Court’s order (dkt. 164), submits this supplemental memorandum in support of its request for compensatory damages of at least \$9,866,637.30, before application of the exemplary damages award already granted by this Court.<sup>1</sup>

## **I. FACTS AND PROCEDURAL POSTURE**

PPG initiated this action against Defendants Jiangsu Tie Mao Glass Co., Ltd. (“TMG”), TMG Chairman and CEO Benhua Wu, and TMG Engineer and Purchasing Agent Mei Zhang (collectively, “Defendants”) to seek redress for their willful and malicious misappropriation of PPG’s trade secrets, including PPG’s confidential and proprietary process to manufacture a new type of commercial aircraft window (“Opticor™ Technology”). *See* Dkt. 1. In October 2017, PPG obtained an entry of default against Defendants from the Clerk of the Court (dkt. 80), and after years of Defendants willfully refusing to enter an appearance in this matter and PPG spending tremendous resources engaging in third-party discovery to ascertain the nature and scope of Defendants’ misappropriation of PPG’s proprietary information, PPG moved this Court for a default judgment and permanent injunction against all Defendants in May 2019 (dkt. 106 and 107). PPG also moved this Court for an award of exemplary damages, attorneys’ fees, costs, and expenses as permitted under the Pennsylvania Uniform Trade Secrets Act (“PUTSA”). *See* Dkts. 114 and 121.

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<sup>1</sup> This Court has already adjudged that Defendants are liable for PPG’s reasonable attorneys’ fees, expenses, and costs under 12 Pa. Cons. Stat. § 5305(3) (*see* dkt. 158 ¶ 6), but deferred judgement on the amounts pending PPG’s submission of a supplemental petition for fees, expenses, and costs to the Court (*see id.* ¶ 9). In accordance with this Court’s estimation that avoiding or postponing incurring the expenses related to providing more detailed evidence on this issue (and responses thereto) at this time may benefit the mediation process (*see id.* ¶ 10), PPG reserves its rights to submit a supplemental petition for fees, expenses, and costs to the Court should the anticipated follow-up mediation also result in an impasse.

At the final hour, in September 2019, Defendants entered an appearance and moved to set aside the October 2017 default (dkt. 129 and 130) while concurrently opposing PPG’s motion for default judgment and permanent injunction (dkt. 136, 137, 144, and 146). After the motions were fully briefed and oral arguments were heard, this Court entered an opinion and order on March 31, 2020, denying Defendants’ motion to set aside their default. *See* Dkts. 157 and 158. Also, after this Court found it “hard to conjure up a more perfect example of willful and malicious misappropriation” of trade secrets (*id.* at 43) than Defendants’ “long-running scheme to steal and cheat” from PPG (*id.* at 34), this Court granted PPG’s motion for a permanent injunction against all Defendants in full (*see* dkt. 158 at ¶¶ 4-5) and granted PPG’s motion for default judgment to the following extent:

- **Adjudged:** Defendants, jointly and severally, violated PUTSA by willfully and maliciously misappropriating PPG’s trade secrets including, among other things, a PPG proprietary report that detailed the manufacturing process for the Opticor™ Technology (*see id.* at ¶ 1);
- **Adjudged:** Defendants are liable to PPG for damages under PUTSA based on their unjust enrichment in the amount of PPG’s research and development costs related to the trade secrets Defendants misappropriated (*see id.* at ¶ 2);
- **Adjudged:** Defendants are liable to PPG for the maximum allowable exemplary damages permissible under PUTSA based on their willful and malicious misappropriation of PPG’s trade secrets (*see id.* at ¶ 3); and
- **Adjudged:** Defendants are liable to PPG under PUTSA for PPG’s reasonable attorneys’ fees, expenses, and costs (*see id.* at ¶ 6).

In its Opinion and Order, this Court deferred judgment on the amount of monetary damages Defendants are liable to PPG for pending the parties’ efforts to resolve in mediation any outstanding disputes “as to the calculation of PPG’s relevant research and development costs.” *See* Dkt. 158 at ¶ 7. Although PPG was willing to engage in a mutual exchange of the parties’ mediation statements weeks before the July 29, 2020 mediation date, no such exchange took place and the mediation was adjourned as the parties “made no progress, agreed upon nothing, and reached no

settlement in respect to damages or otherwise.” *See* Dkt. 163.

## **II. PPG IS ENTITLED TO A MONETARY DAMAGE AWARD OF AT LEAST \$9,866,637.30**

This Court already concluded “PPG’s research and development expenses provide an appropriate measure of Defendants’ unjust enrichment, and therefore PPG’s damages” under PUTSA. *See* Dkt. 157 at 32. Now, “PPG simply needs to back up its damages calculation in a way that allows the Court to scrutinize its calculations in more detail,” which according to this Court, “should not be too arduous.” *Id.* at 40.

As explained in detail below, PPG is entitled to monetary damages of at least \$9,866,637.30. PPG’s damages calculation includes \$8,802,781.30 in non-estimated figures based on PPG’s accounting records, \$798,000 in non-estimated rounded figures based on PPG’s Historical Research and Development Spend Reports (“Historical Spend Reports”), and \$265,856 in reasonable and conservative research and development cost estimates.<sup>2</sup> *See* Decl. of Khushroo Lakdawala (“Lakdawala Decl.”). These figures are supported by affidavits from PPG senior executives,<sup>3</sup> including a declaration from PPG’s Global Director of Engineering and Technology,

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<sup>2</sup> Under PUTSA, 12 Pa. C.S. § 5304, PPG also is entitled to an additional amount that is at least double that \$9.8 million figure, totaling \$29,599,911.90. *See* Dkt. 158 at ¶ 3.

<sup>3</sup> This Court may rely on affidavits from PPG’s senior executives (*e.g.*, dkts. 107-4, 107-5, and the Lakdawala Decl.) and their corresponding exhibits as the basis for its calculation of PPG’s damages, even absent an evidentiary hearing. *See E. Elec. Corp. of New Jersey v. Shoemaker Const. Co.*, 652 F. Supp. 2d 599, 605 (E.D. Pa. 2009) (“In considering the amount of damages or the truth of an averment of evidence, the Court may make its determination by conducting a hearing or by receiving detailed affidavits from the claimant.”) (citations omitted); *see also, e.g., Action S.A. v. Marc Rich & Co.*, 951 F.2d 504, 508 (2d Cir. 1991) (“It was not necessary for the District Court to hold a [Rule 55(b)(2)] hearing, as long as it ensured that there was a basis for the damages specified in the default. [...] [W]e have upheld an award of damages where ‘the District Court relied upon detailed affidavits and documentary evidence, supplemented by the District Judge’s personal knowledge of the record, gained during four years of involvement with the litigation.’”) (*citing Fustok v. ContiCommodity Servs., Inc.*, 873 F.2d 38, 40 (2d Cir. 1989)).

Khushroo Lakdawala, that provides line-by-line categories and amounts of PPG's actual research and development expenditures for each Opticor™ Technology cost center based on PPG's accounting records, as well as the methodologies, assumptions, and calculations for the remaining historical expenditures that were used to determine them with reasonable certainty. *See id.*; *see also Spector v. Fireman's Fund Ins. Co.*, 451 F. App'x 130, 134 (3d Cir. 2011) ("[T]he general rule in Pennsylvania, as in most jurisdictions, is that if damages are difficult to establish, an injured party need only prove damages with reasonable certainty." (citing *ATACS Corp. v. Trans World Commc'ns, Inc.*, 155 F.3d 659, 669–70 (3d Cir. 1998))). Accordingly, the Third Circuit should affirm this Court awarding PPG \$9,866,637.30 in monetary damages based on the evidence set forth herein, absent an abuse of discretion. *See Rainey v. Diamond State Port Corp.*, 354 F. App'x 722, 724 (3d Cir. 2009) ("We review the District Court's handling of a default judgment, including its computation of damages and decision whether to conduct a hearing on damages for abuse of discretion only.") (citing *Hritz v. Woma Corp.*, 732 F.2d 1178, 1180 (3d Cir. 1984); *see also Polidoro v. Saluti*, 675 F. App'x 189, 190 (3d Cir. 2017) ("We review the District Court's damages calculation in a default judgment case for an abuse of discretion." (citation omitted))).

**A. PPG's Non-Estimated Monetary Damages Are At Least \$8,802,781.30**

As a threshold matter, the Court questioned whether certain of PPG's damages figures, as summarized in Mr. Lakdawala's initial affidavit (dkt. 107-5), "relate solely to the trade secrets Defendants misappropriated." *See* Dkt. 157 at 38. The answer is yes. Defendants willfully and maliciously misappropriated at least the following PPG proprietary transparencies-related manufacturing processes that Brent Wright, PPG's Global Platform Director for Aerospace Transparencies, identified: (1) the Opticor™ Technology; (2) casting of urethane and acrylic; (3) formulation of interlayer materials necessary for the lamination of multi-ply transparencies; (4)

formulation of primer materials necessary to ensure or enhance the mutual adhesion of aircraft transparency plies; and (5) application of ITO coatings to plastics. *See id.* at 28-29; *see also* Dkt. 158 ¶ 1. PPG confirms that the expenditures summarized in Mr. Lakdawala's affidavits relate exclusively to PPG's confidential and proprietary process to manufacture a new type of commercial aircraft window, the Opticor™ Technology, as identified in PPG's Complaint and Mr. Wright's declaration. *See* Lakdawala Decl. at ¶ 3.

#### 1. The Opticor™ Technology Cost Centers

As a practice, PPG assigned each of its products a cost center and tracks the costs associated with the creation, development, and commercialization of each product. *See* Lakdawala Decl. at ¶ 4. The seven Opticor™ Technology cost centers relevant to PPG's damages calculation are: (1) NPT Base Polymer Development; (2) NPT Cabin Windows; (3) NPT Ballistics; (4) Opticor™ Sylmar; (5) Opticor™ for OEM Coatings; (6) Huntsville Development for Opticor™; and (7) Huntsville Engineering Hours for Opticor™. *See id.*

From 2006 through April 2015, the Opticor™ Technology cost centers for NPT Ballistics, NPT Base Polymer Development, and NPT Cabin Windows collectively spent \$7,758,792 to research and develop the Opticor™ Technology as follows:

<b>NPT Ballistics GBDC</b>		
<b>Prime Account</b>	<b>Prime Expense Description</b>	<b>2009</b>
5410	Salaries	\$ 148,192
5481	Employee Benefits (i.e., pension costs, group life insurance)	\$ 34,061
5412	Temporary Services	\$ 34,709
5413	Travel	\$ 381
5435	Equipment And Supplies	\$ 6,334
5465	Lab Materials & Supplies	\$ 61,319
5442	Maint Materials And Supplies	\$ 1,784
5423	Professional Services	\$ 4,629
5470, 5496	Service Charges/Credits (costs/income charged to other PPG units)	\$ 22,280
5470	Service Charge - Analytical Tests	\$ 8,434
6470	General Administration	\$ (68,111)
Allocation	Overhead Allocation	\$ 267,681
<b>Total:</b>		<b>\$ 521,693</b>

**NPT Base Polymer Development Opticor GBDC**

Prime Account	Prime Expense Description	2011	2012	2013	2014	2015
5410	Salaries	\$ 147,297	\$ 164,262.11	\$ 185,228.99	\$ 152,879.03	\$ 31,090.85
5410	Employee Benefits (i.e., pension costs, group life insurance)	\$ 36,603	\$ 48,178.62	\$ 45,422.71	\$ 38,983.81	\$ 8,394.53
5412	Temporary Services	\$ 37,936	\$ 26,469.25	\$ 70,318.37	\$ 64,217.11	\$ 17,634.45
5419	Travel	\$ 6,077	\$ 5,622.61	\$ 9,355.53	\$ 8,524.12	\$ 1,454.44
5435	Equipment And Supplies	\$ 3,813	\$ 3,787.66	\$ 29,687.11	\$ 62,129.55	\$ (8,125.00)
5465	Lab Materials & Supplies	\$ 24,997	\$ 41,644.48	\$ 32,945.50	\$ 43,894.08	\$ 11,126.16
5442	Maint Materials And Supplies	\$ 6,100	\$ 573.13	\$ 20.04	\$ 680.00	\$ 1,235.24
5412	Maintenance Temp. Grubb & Ellis	\$ -	\$ 6,236.50	\$ -	\$ -	\$ -
5435	Computer Supplies And Non-Capital Equip.	\$ 237	\$ 2,738.99	\$ -	\$ -	\$ -
5423	Professional Services	\$ 27,624	\$ 26,538.00	\$ 28,273.15	\$ 11,646.47	\$ 40,261.00
5470, 5496	Service Charges/ Credits (costs/income charged to other PPG units)	\$ 16,603	\$ 6,078.99	\$ 1,900.08	\$ 2,185.57	\$ 365.07
5470, 5496	Service Charges/ Credits (costs/income charged to other PPG units)	\$ -	\$ -	\$ 800.00	\$ 160.00	\$ -
5470, 5496	Service Charges/ Credits (maintenance)	\$ -	\$ -	\$ 4,668.09	\$ 1,758.50	\$ 947.38
5426	Mail Service / Postage	\$ -	\$ -	\$ 147.47	\$ 267.11	\$ 103.26
5470	Service Charge - Analytical Tests	\$ 15,677	\$ 12,762.91	\$ 14,518.36	\$ 9,987.00	\$ 2,732.00
Allocation	Overhead Allocation	\$ 222,470	\$ 313,501.46	\$ 360,391.42	\$ 335,054.13	\$ 91,329.00
<b>Total:</b>		<b>\$ 545,434</b>	<b>\$ 658,394.71</b>	<b>\$ 783,676.82</b>	<b>\$ 732,366.48</b>	<b>\$ 198,548.38</b>

**Grand Total:** \$ 2,918,420

**NPT Cabin Windows GBDC**

Prime Account	Prime Expense Description	2006	2007	2008	2009	2010
5410	Salaries	\$ 122,819	\$ 290,101	\$ 294,806	\$ 165,699	\$ 131,050
5410	Shop Labor	\$ 5,445	\$ 19,237	\$ 6,643	\$ -	\$ -
5481	Employee Benefits (i.e., pension costs, group life insurance)	\$ 32,835	\$ 87,091	\$ 76,501	\$ 38,885	\$ 31,253
5412	Temporary Services	\$ 4,160	\$ 12,877	\$ 105,991	\$ 17,871	\$ 39,322
5413	Travel	\$ 3,772	\$ 24,761	\$ 12,199	\$ 1,182	\$ 529
5419	Training/Travel	\$ -	\$ -	\$ 4,000	\$ -	\$ -
5435	Equipment And Supplies	\$ 1,682	\$ 2,015	\$ 54,804	\$ 17,337	\$ 8,395
5465	Lab Materials & Supplies	\$ 72,087	\$ 243,040	\$ 146,171	\$ 60,188	\$ 32,928
5442	Maint Materials And Supplies	\$ 2,845	\$ 24,098	\$ 55,585	\$ 12,915	\$ 1,624
5412	Maintenance Temp. Grubb & Ellis	\$ 3,342	\$ 3,345	\$ 830	\$ -	\$ -
5435	Computer Supplies And Non-Capital Equip.	\$ 74	\$ 972	\$ 6,846	\$ -	\$ 1,727
5423	Professional Services	\$ 4,760	\$ 25,831	\$ 17,392	\$ 3,643	\$ 301
5436	Depreciation	\$ -	\$ -	\$ 3,390	\$ 10,170	\$ 9,323
5470, 5496	Service Charges/ Credits (costs/income charged to other PPG units)	\$ 8,085	\$ 76,024	\$ 48,877	\$ 80,371	\$ 17,478
5470, 5496	Service Charges/ Credits (costs/income charged to other PPG units)	\$ (2,380)	\$ 2,946	\$ (85,630)	\$ 28,982	\$ -
5470	Service Charge - Analytical Tests	\$ 13,804	\$ 48,815	\$ 28,598	\$ 9,697	\$ 18,224
6436	Depreciation	\$ 10,541	\$ 26,666	\$ 43,018	\$ -	\$ -
6470	General Administration	\$ 55,771	\$ 155,365	\$ 163,783	\$ (84,388)	\$ -
Allocation	Overhead Allocation	\$ 146,455	\$ 240,809	\$ 371,586	\$ 331,652	\$ 204,585
Allocation	Overhead Depreciation	\$ -	\$ -	\$ 2,256	\$ -	\$ -
<b>Total:</b>		<b>\$ 486,097</b>	<b>\$ 1,283,993</b>	<b>\$ 1,357,646</b>	<b>\$ 694,204</b>	<b>\$ 496,739</b>

**Grand Total:** \$ 4,318,679

See Lakdawala Decl., Exhibit A.

These research and development costs include expenses for employee costs (*e.g.*, salary, employee health and insurance benefits, wages for temporary services, and business travel), operational costs (*e.g.*, equipment, lab materials, supplies, consultant fees, and inter-company services charges), and allocated general department costs (*e.g.*, overhead, depreciation of general property, and general administrative services) attributed exclusively to the research and development of the Opticor™ Technology. *See id.* The line-item expenditure descriptions, corresponding cost amounts, and the narrative descriptions of each prime expense type were derived from PPG accounting reports for each year the Opticor™ Technology was being developed. *See id.* at ¶ 5 and Exhibit B.

Likewise, between 2008 and April 2015, the Opticor™ Technology cost centers for Huntsville Development for Opticor™ and Opticor™ for OEM Coatings spent \$182,834.30 and \$76,313.00, respectively, to research and develop the Opticor™ Technology as follows:

Huntsville Development for Opticor				
Year	Project No.	Total Cost	Opticor %	Opticor R&D Cost
2008	WD9789	\$ 125,768.25	20%	\$ 25,153.65
2009	WD9789	\$ 238,186.31	20%	\$ 47,637.26
2010	WD9789	\$ 26,054.30	10%	\$ 2,605.43
2010	WD9875	\$ 27,550.36	20%	\$ 5,510.07
2011	WD9930	\$ 1,216.16	100%	\$ 1,216.16
2011	WD9875	\$ 26,711.77	20%	\$ 5,342.35
2012	WD9965	\$ 420.00	100%	\$ 420.00
2012	WD9966	\$ 6,460.24	100%	\$ 6,460.24
2012	WD9875	\$ 19,854.63	20%	\$ 3,970.93
2013	WD9965	\$ 13,969.08	100%	\$ 13,969.08
2014	WD9789	\$ 232,203.18	10%	\$ 23,220.32
2015	WD9966	\$ 6,460.24	100%	\$ 6,460.24
2015	WD9789	\$ 228,403.18	10%	\$ 22,840.32
2015	WD9875	\$ 83,374.21	10%	\$ 8,337.42
2015	WD9940	\$ 323,027.66	3%	\$ 9,690.83
Total:				\$ 182,834.30

Opticor for OEM Coatings at CIC		
Year	Project	Total Cost
2014	Opticor Coating for OEM	\$ 2,015.00
2015	Opticor Coating for OEM	\$ 74,298.00
Total:		\$ 76,313



*See* Lakdawala Decl., Exhibit C. Both of these Opticor™ Technology cost centers accounted for their research and development expenditures on a project-by-project basis, and in instances where the Opticor™ Technology did not account for the entirety of a project, the project allocated to the Huntsville Development for Opticor™ cost center the amount of expenditures exclusively attributable to the research and development of the Opticor™ Technology on that project. *See id.* at ¶ 6. These allocations and figures were derived from PPG accounting reports for each year the Opticor™ Technology was being developed by these cost centers. *See id.* Accordingly, PPG is entitled to monetary damages of at least \$8,017,939.30 for amounts PPG spent at these Opticor™ Technology cost centers specifically attributable to Opticor™ Technology from 2006 through April 2015.

## 2. The Zwick Material Testing Machine & The Max Machine

PPG's accounting records also identified \$784,842 in capital expenditures related to two machines PPG acquired to create and develop the Opticor™ Technology—*i.e.*, one Zwick Material Testing Machine (“Zwick Machine”) that cost \$46,989 and one Max Machine that cost \$737,853. *See* Dkt. 107-5, Exhibit A. In its Opinion, this Court raised the question whether these machines relate more to ongoing manufacturing and production of Opticor™ products rather than the initial development of the Opticor™ Technology, and if so, how are these expenditures a measure of Defendants' unjust enrichment. *See* Dkt. 157 at 39.

Both of these machines were predominately used for the initial creation and development of the Opticor™ Technology rather than ongoing manufacturing and production of Opticor™ products. *See* Lakdawala Decl. at ¶ 7. And, although Defendants might not necessarily save the cost of purchasing these machines when attempting to make Opticor™ themselves, Defendants nevertheless unjustly enriched themselves by the value of the time and money they saved by

stealing the proprietary information that PPG created through the investment in these machines. *See* Dkt. 157 at 36 (“Defendants were not just buying a product from Rukavina, they were buying time. So it makes perfect sense to consider the time and money PPG spent developing the misappropriated trade secrets when the Court decides how much Defendants benefited from stealing those secrets.”).

For example, the Zwick Machine is a tensile testing machine—*i.e.*, a machine that is used to subject materials to a controlled tension until failure—which PPG used to develop, evaluate, and refine the mechanical strength of Opticor™ materials. *See* Lakdawala Decl., ¶ 8. PPG purchased the Zwick Machine specifically to create and develop the Opticor™ Technology by using the machine to learn about and test, among other things, ultimate tensile strength, breaking strength, maximum elongation, reduction area, and similar measurements. of potential Opticor™ materials and configurations. *See id.* Rather than spending the time and money to conduct their own tensile tests to try and create an Opticor™-like material and process of their own, Defendants unjustly enriched themselves by stealing PPG’s Opticor™ Technology instead, including years’ worth of PPG’s proprietary and Opticor™-related tensile testing data it generated with the Zwick Machine. Accordingly, PPG is entitled to the \$46,989 it spent to purchase the Zwick Machine as redress for the time and money Defendants saved by not having to perform these tests on their own.

It is of no moment that Defendants may not necessarily save the cost of the capital expenditures required to make Opticor™ for themselves because the value of Defendants’ unjust enrichment is derived from the years and millions of dollars PPG spent creating the proprietary configurations and processes that enable these machines to make Opticor™ products in the first place—*i.e.*, the Opticor™ Technology. Indeed, if an Atlanta-based soda pop manufacturer purchased a highly specialized machine in hopes of developing a proprietary process to make the

world's most popular soda, and that soda manufacturer spent years to develop a top-secret process that configures the highly specialized machine to mix the right type of ingredients, in the right amounts, in the right order, with the right temperature, with the right tools and in the right way, a competing soda manufacturer that steals the top-secret process and corresponding configurations but never actually produces any pop has still been unjustly enriched. The competitor has been enriched by the amount of R&D time and money it avoided—*i.e.*, the “competitor plainly would have been enriched in the amount of R&D that it never had to do.” *See* Dkt. 157 at 36. The Atlanta soda manufacturer, therefore, would be entitled to monetary damages for the money spent purchasing the highly specialized machine used to create the world's most famous pop in the first place because the value of the competitor's unjust enrichment may be measured “by the costs that the [competitor] would have incurred to acquire or create equivalent materials by legitimate means.” *See* Dkt. 157 at 34 (*citing* Restatement (Third) of Restitution and Unjust Enrichment § 42 cmt. f, illus. 5 (Am. Law Inst. 2011)).

Here, although TMG also incurred the expense of purchasing a Max Machine, the only reason TMG purchased the Max Machine is because PPG already dedicated years of time, industry knowledge, and millions of dollars developing a proprietary process that uses the Max Machine to produce Opticor™ products—*i.e.*, the Opticor™ Technology. Like PPG's Zwick Machine, Defendants unjustly enriched themselves with PPG's investment in the Max Machine because Defendants saved the tremendous amount of time and money they would have otherwise had to spend trying to design their own molds to configure a Max Machine to produce Opticor™ products, determining optimal mold orientation in a Max Machine to produce Opticor™, trying to find a delivery and fill rate that could produce Opticor™ in a Max Machine without defects, identifying how much material resident time is required in a Max Machine to produce Opticor™, ascertaining

what size mix head to use given the Max Machine's configuration and processor system requirements, and other similar knowledge. This information falls precisely within the "10 years of [PPG's proprietary] R&D" that Defendants were buying from Rukavina. *See* Dkt. 157 at 36; *see also* Lakdawala Decl. at ¶¶ 9-10. The money PPG spent to purchase both of these machines was merely the cost of entry. Defendants were unjustly enriched by PPG's investment in these machines because PPG spent years and millions of dollars to develop proprietary data, findings, and processes with these machines to develop the Opticor Technology, only to have Defendants willfully and maliciously misappropriate it from PPG. Accordingly, PPG is entitled to the \$784,842 it spent on these machines to develop the Opticor Technology as redress for the money and time Defendants saved by stealing PPG's proprietary information that it generated with these two machines.

**B. PPG's Estimated Damages of \$1,063,856.00 Are Conservative and Accurate**

PPG also is entitled to damages based on several rounded and/or estimated costs. *See Shoemaker*, 652 F. Supp. 2d at 605 ("Under Pennsylvania law there is no requirement that a damage calculation meet a standard of mathematical certainty." (citations omitted)); *see also Kaczkowski v. Bolubasz*, 491 Pa. 561, 567, 421 A.2d 1027, 1030 (1980) (same). The Court notes that, in order to substantiate its damages, PPG must explain how estimated damages are calculated or reached. *See* Dkt. 157 at 38-39. For the avoidance of doubt, PPG's remaining damages calculations are either derived from an accounting report that tracked PPG's historical research and development spend from 2010 through 2017 ("Historical R&D Spend Report"), or they are estimates based on a reasonable and conservative calculation of average cost of a PPG engineer on a per hour basis, both of which support "a reasonably fair basis for calculating" PPG's monetary damages with reasonable certainty. *See Kaczkowski*, 491 Pa. at 567 ("If the facts afford a

reasonably fair basis for calculating how much plaintiff's entitled to, such evidence cannot be regarded as legally insufficient to support a claim for compensation" (*citing Western Show Co., Inc. v. Mix*, 308 Pa. 215, 162 A. 667 (1932)) (internal quotation omitted)).

1. Damages Based on PPG's Historical R&D Spend Report

PPG seeks damages for the Opticor™ Sylmar and NPT Base Polymer Development cost centers as follows:

Opticor Sylmar	
Year	Research and Development Cost
2012	\$ 50,000
2013	\$ 40,000
2014	\$ 188,000
2015	\$ 20,000
<b>Total:</b>	<b>\$ 298,000</b>

NPT Base Polymer Development Opticor GBDC	
Year	Research and Development Cost
2004	\$ 200,000
2005	\$ 300,000
<b>Total:</b>	<b>\$ 500,000</b>

See Lakdawala Decl. at ¶¶ 11-12.

The 2012 through 2014 Opticor™ Sylmar cost center figures are not estimates. They are rounded numbers derived from PPG's Historical R&D Spend Report. *See* Lakdawala Decl. at ¶ 11. With respect to the 2015 research and development costs, PPG's Historical R&D Spend Report indicates the cost center spent \$130,000 in developing the Opticor™ Technology that year. *Id.* PPG has allocated only 15% of those costs as damages, however, so PPG only accounts for research and development costs through April 2015. *Id.*

The 2004 and 2005 NPT Base Polymer cost center figures were also derived from PPG's Historical R&D Spend Report. These figures, however, are estimates because PPG does not have similar accounting records that maintain the costs associated only with the NPT Base Polymer cost center for those years. *See* Dkt. 107-5 at ¶ 6. Instead, the Historical R&D Spend Report outlined the historical financial projections of PPG's transparencies business as a whole, and the \$200,000

and \$300,000 respective cost estimates for those two years are based on those projections and the estimated percentage of work that would have been necessary to develop the Opticor™ Technology at that time. *See id.*; *see also* Lakdawala Decl. at ¶ 12.

## 2. Damages Based on Estimates

PPG also seeks \$265,856 in damages attributable to the engineering hours spent developing the Opticor™ Technology at the Huntsville Opticor™ cost center from 2006 through 2014. *See* 107-5, Exhibit A. PPG's calculation reflects 2,900 estimated hours from 2006 through 2011,<sup>4</sup> and 403.2 recorded hours from 2012 through 2014, for a total of 3,303.2 hours. *See id.*; *see also* Lakdawala Decl. at ¶¶ 13-15. PPG calculated \$265,856 in corresponding damages by multiplying the 3,303.2 hours by a conservatively estimated average labor rate of \$80.00 per hour. *See id.* PPG's estimated hours reflect the work of 2 engineers who spent approximately 10% of their time (~4 hours per week) working to develop the Opticor™ Technology in 2006. *See id.* In 2007 the estimate doubles primarily because the engineering team transitioned from initial research and development in 2006 to a qualification posture in 2007, which required more testing. *Id.* The remainder of the estimates for 2008 through 2011 are based on PPG's best recollection of the engineering activities occurring at the time and PPG's conservatively informed estimate regarding the amount of engineering hours dedicated to any milestone in any given year. *Id.* In general, however, the hours consistently reflect an average of 2 or 3 engineers that dedicated 10% - 20% (4 to 8 hours per week) of their time developing the Opticor™ Technology as part of the Huntsville Opticor™ cost center. *Id.*

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<sup>4</sup> *I.e.*, 400 hrs (2006); 800 hrs (2007); 600 hrs (2008); 500 hrs (2009); 300 hrs (2010); and 300 hrs (2011).

With respect to the \$80 per hour estimated labor cost, the average engineer who would have worked on the Opticor™ Technology between 2006 and 2014 would be a Senior Engineer, who generally would have earned a salary of at least \$160,000 per year. *See* Lakdawala Decl. at ¶ 15. In addition to the Senior Engineer’s salary, PPG paid employee benefit costs of approximately 28% of the employee’s salary, or ~\$44,800 per year. *See id.* With these two costs alone, excluding additional overhead costs, the average hourly rate for a Senior Engineer who would have been working on the Opticor Technology between 2006 and 2014 is approximately ~\$98.46 per hour, well above PPG’s conservative estimate of \$80 per hour. Accordingly, PPG estimates are based on a reasonable calculation that determines PPG’s monetary damages with reasonable and conservative certainty, and thus, PPG should be entitled to these estimated research and development costs in full. *See ATACS Corp. v. Trans World Commc'ns, Inc.*, 155 F.3d 659, 669–70 (3d Cir. 1998) (noting that “reasonable certainty embraces a rough calculation that is not ‘too speculative, vague or contingent’ upon some unknown factor” and the standard does not preclude a damages award because of “some uncertainty as to the precise amount of damages incurred”) (*citing Scobell, Inc. v. Schade*, 455 Pa. Super. 414, 688 A.2d 715, 719 (1997)).

Finally, PPG seeks damages in the amount of \$10,000 and \$20,000 for estimated research and development costs associated with the Huntsville Development for Opticor™ cost center in 2006 and 2007, respectively. PPG does not have accounting records for these periods, but the estimation is based on PPG’s best recollection and informed estimation of what this Opticor™ cost center would have spent to research and develop the Opticor™ Technology at that time. *See* Lakdawala Decl. at ¶ 16.

### III. CONCLUSION

For the foregoing reasons, this Court should award PPG monetary damages of at least \$9,866.637.30.

Dated: August 21, 2020

Respectfully submitted,

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## CERTIFICATE OF SERVICE

I hereby certify that, on August 21, 2020, I caused the foregoing *Plaintiff's Supplemental Memorandum In Support Of Its Request For Monetary Damages*, along with the corresponding declaration and exhibits thereto, to be filed with the Clerk of the Court using the CM/ECF system, which will automatically send notification of such filing to all counsel of record.

Dated: August 21, 2020

Respectfully submitted,

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